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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,810	05/15/2001	Gerald R. Malan	UOM0208PUSP	1546

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EXAMINER

AILES, BENJAMIN A

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/855,810	Applicant(s) MALAN ET AL	
	Examiner Benjamin A Ailes	Art Unit 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is responsive to communications filed 26 November 2004. This action is made **FINAL**.

2. Claims 1-20 remain pending.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-3, 6, 8-11, 14, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soha (U.S. 4,817,080), hereinafter referred to as Soha, in view of Smith, R. N. et al. ("Operating Firewalls Outside the LAN Perimeter"), hereinafter referred to as Smith.

5. As per claims 1 and 9, Soha discloses a method of collecting statistics at a plurality of measurement points (col. 4, lines 23-31 and lines 41-43). Soha discloses the use of multiple monitor units in order to collect statistics and keep track of traffic flow (col. 4 lines 37-45). Soha discloses a method of statistics collection, but is silent on the statistics analysis in order to reconstruct a path taken by undesirable network traffic. However, Smith discloses a method of blocking undesirable network traffic (p. 496, col. 2, paragraph 4, lines 1-10). The reconstruction of a path taken by undesirable network traffic through the network is considered a method used to block unwanted traffic from getting to its destination. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to block undesirable network traffic based on network

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statistics. It is for this reason that one of ordinary skill in the art would have been motivated to implement Smith's network unwanted traffic blocking method using a statistics collection mechanism disclosed by Soha.

6. As per claims 2 and 10, in accordance with claims 1 and 9, respectively, Soha discloses a network, but is silent on the blocking of undesirable network traffic.

However, Smith discloses the blocking of undesirable network traffic within a computer network (p. 496, col. 2, para. 4, lines 1-10). One with ordinary skill in the art at time of applicant's invention would have found it advantageous to use the method disclosed by Smith in accordance with the network disclosed by Soha in order to block undesirable network traffic. It is for this reason that one of ordinary skill in the art would have been motivated to use the network traffic blocking method disclosed by Smith in accordance with the network disclosed by Soha.

7. As per claims 3 and 11, in accordance with claims 1 and 9, respectively, Soha discloses a network, but is silent on the use of a router. However, Smith discloses the use of routers in the forwarding infrastructure (p. 493, col. 2, para. 2). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use a router configuration similar to the one disclosed by Smith in accordance with the network disclosed by Soha. It is for this reason that one of ordinary skill in the art would have been motivated to use routers in a forwarding infrastructure.

8. As per claims 6 and 14, in accordance with claims 1 and 9, respectively, Smith discloses a method of receiving upstream statistics by way of a backward trace (p. 497,

col. 1, para. 1, lines 6-9). Smith also discloses the method of using this information to redirect or block the path of the undesirable network traffic (p. 496, col. 2, para. 4).

9. As per claims 8 and 16, in accordance with claims 1 and 9, Soha discloses the use of a computer network, but is silent on whether or not the computer network is involved with the Internet. However, Smith discloses a computer network associated with the Internet (p. 493, col.1, para. 1). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the Internet as the computer network as disclosed by Smith in accordance with the statistics gathering network method disclosed by Soha. It is for this reason that one of ordinary skill in the art would have used the Internet as the computer network.

10. As per claims 17 and 19, in accordance with claims 1 and 9, respectively, Smith discloses undesirable network traffic including denial of service attacks (p. 494, col. 2, para. 6 – p. 495, col. 1).

11. As per claims 18 and 20, in accordance with claims 17 and 19, respectively, it would be obvious to one of ordinary skill in the art for the computer network to have service providers. It is deemed inherent for a computer network to have service provider networks.

12. Claims 4, 5, 7, 12, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soha (U.S. 4,817,080), hereinafter referred to as Soha, in view of Smith, R. N. et al. ("Operating Firewalls Outside the LAN Perimeter"), hereinafter referred to as Smith, and in further view of Phaal (U.S. 5,315,580), hereinafter referred to as Phaal.

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13. As per claims 4 and 12, in accordance with claims 1 and 9, respectively, Soha discloses the use of a network monitoring system in order to gather statistics, but does not disclose specific examples of statistics gathered. However, Phaal discloses a similar network-monitoring device that collects statistics, including flow-based statistics (col. 6, line 48 - col. 7, line 2). It would have been advantageous to one of ordinary skill in the art at the time of applicant's invention to gather statistics based on network flow. It is for this reason that one of ordinary skill in the art would have found it obvious and would have been motivated to gather flow-based statistics.

14. As per claims 5 and 13, in accordance with claims 1 and 9, respectively, Soha discloses the use of packet statistics, but is silent on the use of packet statistics providing information about a set of packets. However, Phaal discloses packet statistics gathering including information about packets entering the network (col. 6, lines 48-61). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to utilize the packet statistics method disclosed by Phaal because there are many types of statistics that can be derived from a single packet (col. 6, lines 48-51). It is for this reason that one of ordinary skill in the art would have been motivated to utilize the packet statistics gathering method disclosed by Phaal.

15. As per claims 7 and 15, in accordance with claims 1 and 9, respectively, Smith teaches the method of reconstructing a path taken by undesirable network traffic, but is silent on extracting profiles from statistics collection. However, Phaal discloses a method of creating profiles from statistics collected by using a traffic matrices (col. 6, line 62 – col. 7, line 2) that can be available for analysis (col. 6, lines 44-47). It would

have been obvious to one of ordinary skill in the art at the time of applicant's invention to extract profiles in the form of traffic matrices in order to determine how to redirect undesirable network traffic. It is for this reason that one of ordinary skill in the art would have been motivated to utilize the traffic matrices disclosed by Phaal to assist in reconstructing a path taken by undesirable network traffic.

Response to Arguments

16. Applicant's arguments filed 26 November 2004 have been fully considered but they are not persuasive.

17. (A) Applicant argues, "...Soha does not collect statistics at a plurality of measurement points located within routing and forwarding infrastructure of a computer network."

18. As to point (A), the applicant's argument is not persuasive. Soha clearly discloses in column 2 lines 15-26 and column 4, lines 23-31 and lines 41-43 the ability to collect statistics at multiple locations within a computer network. A plurality of network monitors are used in multiple locations of the network herein referred to as the "routing and forwarding infrastructure."

19. (B) Applicant argues, "...Smith is not concerned with analyzing statistics in order to reconstruct a path taken by undesirable network traffic through a computer network from a source of the traffic."

20. As to point (B), the applicant's argument is not persuasive. The examiner does not depend upon Smith to analyze statistics that have been gathered, but merely the method of blocking, in this case "reconstructing a path taken by undesirable network

traffic," through a computer network from a source of the traffic. The method of blocking unwanted network traffic in a computer network is clearly disclosed by Smith on pg. 496, column 2, paragraph 4, lines 1-10.

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

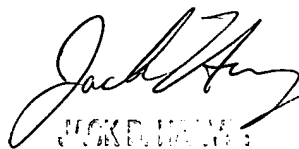
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A Ailes whose telephone number is (571)272-3899. The examiner can normally be reached on M-F 7:30-5, First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack B Harvey can be reached on (571)272-3896. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).\


JACK D. AILES
SUPERVISOR, PATENT EXAMINER

Benjamin Ailes
Art Unit 2142
Patent Examiner